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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,156	05/31/2005	Yuichiro Miyamae	2005-0835A	1453
513 7590 02/26/2008 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021				
EXAMINER PERRY, ANTHONY T				
ART UNIT 2879		PAPER NUMBER		
MAIL DATE 02/26/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,156

Applicant(s)

MIYAMAE ET AL.

Examiner

ANTHONY T. PERRY

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-4 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on 11/28/07 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 7,261,917 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura et al. (JP 2003-183650).

Regarding claim 1, Kawamura teaches a plasma display device including a plasma display panel in which a plurality of discharge cells are arranged, and a phosphor layer in color corresponding to each discharge cell is disposed, and the phosphor layer emits light by being excited by ultraviolet light, wherein the phosphor layer has a green phosphor layer including $\text{Zn}_2\text{SiO}_4\text{:Mn}$; and the green phosphor made of $\text{Zn}_2\text{SiO}_4\text{:Mn}$ has an element ratio of zinc (Zn) to silicon (Si) of 2/1, which is a stoichiometric ratio at a proximity of a surface thereof and wherein the green phosphor has an even density extending from the surface to an inside of the green phosphor (for example, see the abstract).

The Examiner notes that the claim limitation that the green phosphor made of $\text{Zn}_2\text{SiO}_4\text{:Mn}$ is “processed by calcinations in an atmosphere including at least one of N_2 , $\text{N}_2\text{-O}_2$ or Ar-O_2 at a pressure not less than 0.105 MPa and not greater than 150 MPa” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that

a claimed apparatus cannot be distinguished over the prior art by a process limitation. Patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. Rather, is the product itself which must be new and not obvious. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding claim 2, Nishimura teaches a plasma display device including a plasma display panel in which a plurality of discharge Cells are arranged, a phosphor layer in a color corresponding to each discharge cell is disposed, and the phosphor layer emits light by being excited by ultraviolet light, wherein the phosphor layer has a green phosphor layer including $\text{Zn}_2\text{SiO}_4\text{:Mn}$; and the green phosphor made of $\text{Zn}_2\text{SiO}_4\text{:Mn}$ has an element ratio of zinc (Zn) to silicon (Si) equal to a stoichiometric ratio (2:1) at a proximity of a surface thereof, and wherein the green phosphor has an even density extending from the surface to an inside of the green phosphor and is positively charged or zero-charged (for example, see the abstract).

The Examiner notes that the claim limitation that the green phosphor made of $\text{Zn}_2\text{SiO}_4\text{:Mn}$ is “processed by calcinations in an atmosphere including at least one of N_2 , $\text{N}_2\text{-O}_2$ or Ar-O_2 at a pressure not less than 0.105 MPa and not greater than 150 MPa” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. Rather, is the product itself which must be new and not obvious. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Allowable Subject Matter

Claims 3-4 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record fails to disclose or fairly suggest:

- A method of producing a phosphor wherein Zn and Si in a ratio of 2:1 is mixed with salt and water which is dried then pre-fired in air at 600°C to 900°C producing a pre-fired matter and then the pre-fired matter is fired at 1000°C to 1350°C, in combination with the remaining claimed limitations as called for in claim 3.
- A method of producing a phosphor wherein a raw material of oxide and/or carbonate including elements of Zn, Si, and Mn are mixed and then fired in air at 600°C to 900°C producing a pre-fired matter and then the pre-fired matter is fired

at 1000°C to 1350°C, in combination with the remaining claimed limitations as called for in claim 4.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anthony Perry/

Anthony Perry
Patent Examiner
Art Unit 2879
February 17, 2008

/Mariceli Santiago/
Primary Examiner, Art Unit 2879